

## Safety Advisory Committee

April 4, 2014  
1:30 – 3:00 PM

### Minutes

Committee Member	Representing	Present
V. Potapenko, M. O. Leimer, J. Willen	Human Resources Advisors	<b>X</b>
Blodgett, Paul M.	Environment, Health and Safety Division	<b>X</b>
Bluhm, Hendrik	Chemical Sciences Division	<b>X</b>
Buonsanti, Raffaella	Materials Sciences Division	<b>X</b>
Christensen, John N.	Earth Sciences Division	<b>X</b>
Dardin, Steve	Physics Division	
Franaszek, Stephen	Genomics Division	
<i>vacant</i>	Nuclear Science Division	
Giuntoli, Patricia	Computing Sciences Directorate	
<i>vacant</i>	Environmental Energy Technologies Division	
Martin, Michael C.	Advanced Light Source Division	<b>X</b>
Sauter, Nicholas	Physical Biosciences Division	
Seidl, Peter	Accelerator & Fusion Research Division; SAC Chair	<b>X</b>
Taylor, Scott E.	Life Sciences Division	<b>X</b>
Tomaselli, Ann	Information Technology Division	<b>X</b>
Tucker, Eugene	Facilities Division	<b>X</b>
Thomas, Patricia M.	Safety Advisory Committee Secretary	<b>X</b>
van der Lippe, Henrik	Engineering Division	

**Others Present:** Michael Carr, Joe Dionne, Kurt Ettinger, Jim Floyd, Michelle Flynn, Howard Hatayama, Quang Le, Bob Mueller, Andrew Peterson, Scott Robinson, Marty White, Mike Wisherop, Weyland Wong

### **Comments from the Chair – Peter Seidl**

Peter Seidl and Jim Floyd are visiting the LBNL Associate Lab Directorates to solicit feedback on the Peer Review process. They have met with Energy Technologies and Physical Biosciences so far.

### **ESH Documents Pipeline – Mike Wisherop**

The new issues on the Pipeline are:

- **Parking policy for expectant mothers** --The proposed process will be for expectant mothers who need to park closer to their work location to submit a request form to Human Resources and be granted a temporary (30-day) blue triangle parking permit. This system has also been used for other types of temporary handicaps.

- **Pressure Safety and Cryogenics Program major revision** – A working group has been established. Most of the changes will be clarifications. There is some information that needs to be added or improved (see Scott Robinson's presentation below).

The Electrical Safety Authority Having Jurisdiction policy and restructuring has been completed.

There will be changes in Laser Safety. Subcommittee Chair Marcus Hertlein is leaving LBNL. Joel Ager will be the interim Chair. The Subcommittee is reviewing the laser eye examination requirement.

### **Lessons Learned from Power Outage – Jim Floyd**

On February 17, a transformer switch failed, resulting in a power outage at Buildings 54, 70, and 70A. There were power dips in other buildings. Diesel generators came on at Bldg. 2 and 6. The containment system worked as intended. Facilities began a failure analysis. The switch that failed had been inspected within the past year. We have three main substations. There have been several failures of similar switches. We were lucky that there was a contractor on site who is qualified to perform the repairs and could respond quickly. LBNL is considering active monitoring systems for critical equipment and having spare parts available.

On February 18, LBNL was working on immediate follow-up activities, including notification of management and occupants of affected buildings; coordination of incident response between Facilities, Protective Services, and EHS Division; and providing back-up power to access control systems, ventilation systems, and critical equipment. We learned that our notification scheme needs improvement. In situations that are not major disasters requiring the full Emergency Operations Center, the intent is for the Protective Services duty officer to coordinate dissemination of information to the affected and responding Divisions. There was backup power for the access control system, but not for the servers that feed information into the system.

February 19-23, LBNL worked on monitoring and stabilizing the situation. There were coordination meetings and teleconferences, and lab tours by EHS and Building Managers. The Continuity of Operations Plans were very useful in identifying critical equipment. Divisions are encouraged to keep these plans up-to-date. Temporary office space was set up in part of the café that had power for people needing to meet critical project deadlines. There will be a planned shutdown in June for moving liquid nitrogen tanks.

On February 24, LBNL worked on restarting operations. The repair work was scheduled on the weekend to minimize disruption.

The next steps are for Facilities to evaluate how to reduce the risk of unexpected transformer switch failures, Protective Services to improve the incident response and notification procedures, EHS to evaluate and improve stabilization and start-up plans, and everyone to work on improving communications.

John Christensen commented that there were problems identifying the blowers that were connected to fume hoods because they were not labeled. Facilities did not have flow meters to determine whether hoods were functioning as intended, and the control systems can malfunction. Some electrical outlets were mislabeled as to which ones had back-up power.

### **Pressure Safety – Scott Robinson**

A working group has been formed. The members are:

- John Christensen (ESD and SAC Representative)
- Jonathan Ajo-Franklin (ESD)
- Elke Arenholz and Doug Taube (ALS)
- Mike Carr (BSO)
- Mike Dong (Facilities)
- Kurt Ettinger (EHS)
- Rick Kelly (MSD)
- Martin Neitzel (CSD)
- Joe Saba (Engineering)
- Will Thur (CXRO)

So far, the team members have identified 37 issues. Pressure safety is a complex program that interacts with other programs such as chemical hygiene, compressed gas, cryogenics, LOTO, and ventilation. The current pressure safety chapter does not have any link to the LOTO requirements. There are questions about when and how Engineering Safety Notes should be used. There are questions about how pressure safety will interact with the new work authorization systems. There are some cryogen safety issues mixed into the Pressure Safety chapter that should be separated for clarification. The Cryogen chapter also needs to provide more guidance on oxygen deficiency monitoring requirements, such as whether monitors need to be tied into building emergency systems.

There is a project plan in place for Pressure Safety, with action items to be completed by July 4. Corrective actions will be tracked in CATS. There will be progress updates to SAC.

## **Compressed Gas Assessment – Kurt Ettinger**

Andrew Peterson organized an assessment of LBNL's compressed gas safety program, with 3 independent parties (Bob McCallum and Kyle Turner from McCallum/Turner and Mike MCDaniel from SLAC), and Bill Wells and Andrew Peterson from LBNL EHS. The assessment took place over three days (March 3-5). The assessment team looked at the life cycle of compressed gases at LBNL, from procurement to disposal. There were 2 findings, 13 observations, 3 noteworthy practices, and 24 opportunities for improvement. They performed a SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis to rank priorities. The top priorities were:

- Evaluate outdoor gas storage locations to identify and correct hazards; and
- Define and improve the process for returning old cylinders to former vendors.

In addition, several Divisions are assessing the implementation of the compressed gas safety program within their Divisions as part of this year's Focus Area Self-Assessments.

Some of the requirements in the Compressed Gas chapter of the LBNL ESH Manual do not clearly map to code requirements. EHS will be reviewing whether these LBNL requirements are necessary.

Some of the issues with outdoor storage areas are their locations and the lack of clear ownership. Some of the storage areas have slopes that make it difficult to move cylinders, or are near traffic or egress routes, or lack covers and protection from the weather. Some storage areas are shared by several Divisions or research groups and it is not clear who is responsible for maintaining them.

## **HSS Electrical Safety Investigation – Jim Floyd**

LBNL has received notice that DOE Health, Safety, and Security (HSS) will be conducting an enforcement investigation of the November 2013 electrical shock incident that occurred during the construction of the General Purpose Laboratory building. The Price-Anderson Amendments Act (PAAA) requires DOE Labs to identify incidences of non-compliance with regulations or DOE Orders. The visit will be a formal, factual investigation. Criminal and civil penalties may apply to any violations found. The cost of the investigation and any penalties are not allowable expenses and will come out of the UC contract fee. The Office of Contractor Assurance has developed a project plan. Most of the other National Laboratories have undergone similar enforcement investigations. LLNL is providing assistance in planning. The investigation will focus on the GPL incident and is not a review of the Lab-wide electrical safety program. LBNL must demonstrate that we understand the seriousness of the issues and have the resolve to correct deficiencies.

### **Work Planning and Control Beta Test Update – Michelle Flynn**

Michelle Flynn, Scott Taylor, and the EHS Liaisons have been meeting with the people the Divisions have selected to participate in the Beta Test. The meetings include an introduction to the work planning process and the Activity Manager application. The purpose is to validate the process, system requirements, and usability. They are discussing roles and responsibilities. Divisions are starting to think about how to organize their projects and activities in the system, starting with their existing work authorizations. The hazards and controls information still needs some work. About half of the Beta Test meetings have been held, and feedback is being collected. Michelle Flynn and Scott Taylor plan to present the consolidated feedback at the next SAC meeting.

### **Closing Remarks**

The Safety Advisory Committee thanks Weyland Wong for his contributions and wishes him a happy retirement!

The May meeting may be cancelled. Both Peter Seidl and Pat Thomas will be away from the Lab on the usual meeting date. We will evaluate whether there are any urgent agenda items that can't wait until June.

The Nuclear Science Division Peer Review feedback/response is scheduled for the June 6 meeting.

The meeting was adjourned at 3:00 PM  
Respectfully submitted, Patricia M. Thomas, SAC Secretary